



CONCORD BOARD OF HEALTH

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Public Health
Prevent. Promote. Protect.

To: Elizabeth Hughes, Planning Director

From: Susan Rask, Public Health Director

Re: Application for Zoning Board of Appeals Special Permit --Proposed Planned Residential Development—Keuka Rd. "Hosmer Meadow"

Date: May 15, 2017

The Health Division has reviewed the proposed Planned Residential Development (PRD) submitted by Keuka Rd. LLC for the proposed Keuka Rd. "Hosmer Meadow" subdivision. This review was based on the Definitive Subdivision Plan Application received April 3, 2017, design plans by Markey and Rubin Civil Engineering dated April 3, 2017, the Zoning Board of Appeals Application for a Special Permit received April 3, 2017, and on-site sewage disposal plans and applications for Disposal System Construction Permits for Systems 1 and 2 (located on Lots A and B) submitted by Markey and Rubin Civil Engineering dated April 12, 2017.

The Health Division offers the following comments relative to whether the proposed on-site sewage disposal systems can reasonably be constructed as shown in the plans submitted.

1. The Health Division has determined that the aggregate design flow for the onsite sewage system for the project exceeds 2000 gallons per day (System 1 design flow is 960 gpd; System 2 design flow is 1770 gpd; aggregate design flow is 2730 gpd).
2. Per 310 CMR 15.002 Definitions, Facility is defined as:
Facility - Any real property (including any abutting real property) and any buildings thereon, which is served, is proposed to be served, or could in the future be served, by a system or systems, where:
 - (a) legal title is held or controlled by the same owner or owners; or
 - (b) the local Approving Authority or the Department otherwise determines such real property is in single ownership or control pursuant to 310 CMR 15.011 (aggregation).
3. Per 310 CMR 15.011: Criteria to Assess Whether Facilities are in Separate Ownership or Control:
 - (1) In assessing whether facilities are in single ownership for purposes of determining whether the total design flow exceeds the 2,000 gpd threshold of 310 CMR 15.202 (recirculating sand filters) or the permitting, treatment and effluent standard requirements of 314 CMR 5.00: Ground Water Discharge Permit Program, the Approving Authority may consider one or more of the following factors:

- (a) whether the owner or operator of facilities asserted to be in separate ownership operate the facilities independently, including whether there are any common or related beneficiaries among the separate ownership entities, and whether each owner acts with due regard for the independent financial interests of the owner, operator and any beneficiaries of the assertedly separate facilities;
 - (b) whether, and the extent to which, legal agreements exist which provide the owner or operator of facilities asserted to be in separate ownership the right to access each other's facilities and/or to use and share financial responsibility for common buildings, infrastructure, or services;
 - (c) the existence of some evidence that ownership or control of the facilities asserted to be in separate ownership or control was arranged to circumvent the requirements of 310 CMR 15.202 (Recirculating Sand Filters), or 314 CMR 5.00: Ground Water Discharge Permit Program, including evidence that two or more facility owners have acted in concert to acquire or dispose of adjacent properties to avoid the above regulatory requirements;
 - (d) the effect of the facilities on the public health and environment, including an evaluation of whether the facilities provide local groundwater recharge and/or are cluster developments that preserve open space.
4. The Health Division's determination that this project consists of one Facility (as defined above) with a total design flow of >2000 gpd is based on the following:
- a. The applicants have stated, by email dated April 28, 2017, that all 11 planned residential units on Lots A and B will be included in one Condominium Master Deed.
 - b. The parcels of land constituting proposed Lots A and B are all owned by Keuka Road LLC.
 - c. Lots A and B are located across the street from one another. Keuka Rd., a private way, separates the lots. Lots A and B have legal rights that extend to the middle of the private way and therefore constitute abutting properties.
 - d. If Lots A and B are developed as proposed they will share common infrastructure as outlined below; both Lots A and B derive benefit from, and will have shared responsibility for, this common infrastructure:
 - A shared stormwater collection and disposal system that serves both lots.
 - As much as 8 ft. of fill will be brought onto the site to construct Keuka Rd., the two onsite sewage disposal systems, and the house foundations. The fill extends onto both Lots A and B and Keuka Rd. The sewage disposal systems are being constructed in fill to meet the requirements of 310 CMR 15.212: Depth to Groundwater: The minimum vertical separation distance between the bottom of the stone underlying the soil absorption system above the high ground-water elevation shall be (b) five feet in soils with a recorded percolation rate of two minutes or less per inch. Neither sewage disposal system can be installed as designed without this fill being placed on site.
 - Retaining walls varying in height from approximately 1 to 3 ft. will be installed adjacent to the Soil Absorption Systems for both Systems 1 and 2 to meet the requirements 310 CMR 15.255 (2). The proposed soil absorption systems and road design cannot be built without these walls.
 - Retaining walls varying in height from 1 to 6 feet are proposed to be constructed in the road right of way and along Lots A and B for the purpose of containing the fill used to build the road. The road cannot be constructed as designed without these walls.

5. On-site sewage disposal systems with design flow > 2000 gpd must meet the following requirements of 310 CMR 15.000 and Concord Board of Health regulations. Systems 1 and 2 as designed do not meet the following requirements:
- a. 15.254(2) Pressure Distribution: Pressure distribution of septic tank/recirculating sand filter effluent to the soil absorption system shall be required for: a system to serve a facility with a design flow of 2,000 gpd or greater.
 - b. 15.212(2) Depth to Groundwater: For systems with a design flow of 2,000 gpd or greater, the separation from high groundwater as required by 310 CMR 15.212(1) shall be calculated after adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3). Applicants have not provided a groundwater mounding analysis.
 - c. Concord Board of Health Regulation Chapter 3.00: Wastewater Management, Section 3.06 requires a 100 setback to Wetlands Resources for soil absorption systems when septic system design flow is greater than 2000 gpd. A portion of the soil absorption system of System 1 on Lot B is located within the 100 ft. wetlands setback.

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